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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,750	10/20/2003	Yong-Suk Kim	Q77420	9272

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EXAMINER

ALAM, FAYYAZ

ART UNIT	PAPER NUMBER
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2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/687,750	Applicant(s) KIM ET AL.	
	Examiner Fayyaz Alam	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/6/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's amendment/arguments filed on 2/13/2007. **This action is made FINAL.**

Response to Arguments

Applicant's arguments filed 2/13/2007 have been fully considered but they are not persuasive.

Applicant generally argues on pages 6 and 7 that Davies fails to disclose connectionless broadcast without a request for a connection setup and that the inquiry message used by Davies indicates "connection setup".

Examiner respectfully disagrees. Davies invention as disclosed does not require a connection setup for broadcast information. Davies makes use of two modes of communication, namely push and pull modes, where push mode can be implemented by itself without necessarily using the pull mode in tandem. The push as defined by Davies in which the beacons or base stations (12 & 14) (read as wireless communication device) can broadcast information to the portable terminals (10) (read as external devices) (see [0036]). The pull mode need not be implemented unless the portable terminal (read as wireless device) wishes to join the piconet and transmit information back to the beacon or base station (read as wireless communication device) (see [0038; 0041; 0052]). In addition, broadcasting an inquiry message is **not** a "connection setup" or a "request for a connection setup" as claimed in the independent

claims 1, 9, and 17. An inquiry message in the Bluetooth protocol is a device discovery message (see [0045]), where master device or a base station broadcasts information, and **in response** to the inquiry message, the slave device makes a connection request if it desires to join a given piconet. Therefore, a connection setup message is issued by the slave device and thus an inquiry message master device or the base station is not a connection setup message or request for a connection setup (see [0043]).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 6, 8, 10 - 14, 16 - 17, 19 - 24 are rejected under 35 U.S.C. 102(b) as being anticipated by **Davies et al. (U.S. Application # 2002/0002034)**.

Consider **claim 1**, Davies disclose a short range beacon or base station (12) (read as wireless communication device; fig. 1; [0030]) capable of only **push mode broadcast** communication (read as connectionless; [0036]) with a mobile telephone (10) (read as external device) comprising:

a transceiver (since the base station (12) is disclosed (see [0036]), meaning it could transmit and receive to and from the mobile telephone (10). Therefore the beacon or base station (12) must have a transceiver);

a synchronization information generator, since the said station (12) is capable of transmitting an additional data field (BCD; fig. 1; [0057 - 0061]) with an inquiry message comprising synchronization information such as clock data and initial packet position (see [0042] also);

a broadcast data packet generator, since the said station (12) is capable of transmitting broadcast data comprising location information with said inquiry message and therefore has a broadcast packet generator ([0068] and [0069];

a controller, since the said base station (12) is capable of transmitting synchronization information and broadcast data packet, therefore, it must have a controller to control which of the said transmissions to pass on to the transceiver within the base station (12). In addition, Davies et al. disclose transmitting clock data (read as synchronization information) and CA broadcast data (read as broadcast data packet) and a need to discriminate between the two by using two separate DIACs, so a controller would be needed to control which data or information is sent at a given instance ([0054]). Also, the broadcast data packet and synchronization information are transmitted by the base station (12) using the inquiry message with additional data field and therefore, in "push mode" no connection is established when broadcast is received at the portable terminal or external device (read as without a request for a connection setup) (see [0036; 0038; 0050; 0052; 0054]).

Consider **claims 2 and 10** as applied to claims 1 and 9, Davies et al. disclose clock data (read as synchronization information) for synchronization and CA broadcast data (read as broadcast data packet) for transmission of location based information as

part of the inquiry message, therefore, a slot or window will be available to transmit the said data or information ([0054]). In addition, it is also disclosed a switch from clock (read synchronization) to data (read as broadcast packet) can be accomplished at "half-way marks" (meaning during a given transmission slot or window, so thereby a window is split into two, one for data and one for sync info) which would define a so called beacon window and broadcast window for synchronization information and broadcast data packet, respectively ([0056]).

Consider **claims 3 and 11** as applied to claims 2 and 10, Davies et al. disclose an inquiry message with an extended data field (read as EID packet) which is used for synchronization information ([0050; 0057 - 0061]).

Consider **claims 4 and 12** as applied to claims 3 and 11, Davies et al. disclose that inquiry message with an extended field (read as EID packet) contains Dedicated Inquiry Access Code or DIAC, beacon identity (read as Bluetooth device address), and beacon clock (read as clock information) ([0042 - 0045] and [0050]).

Consider **claims 5, 6, 13, and 14** as applied to claims 4, 5, 12, and 13, respectively, Davies et al. disclose the inquiry message with an extended field (read as EID packet) further contains position of the first packet (read as offset slot; [0057]), number of full train switches to determine end of transmission (read as size of broadcast window; [0061]), and repetition number (read as broadcast repetition number; [0060 and 0065]) (all read as setup information for broadcast window; see [0057 - 0061]).

Consider **claims 8 and 16** as applied to claims 1 and 9, Davies et al. disclose a Bluetooth link for his invention ([0067]).

Consider **claim 9**, Davies disclose a wireless communication method capable of **push mode** (read as connectionless; [0036 and 0041]) broadcast comprising:

inquiry message with extended field (read as generating synchronization information) for synchronization with more than one mobile telephone (read as external device; abstract; [0057 - 0061]), and said inquiry message comprising CA data (read as generating broadcast packet; fig. 4; [0050]) for containing location information (read as broadcast information; [0068 - 0069]);

broadcasting inquiry message with extended field (read as synchronization information; [0057 - 0061]) to the mobile telephone (10) (read as external device) for synchronization;

transmitting CA data (read as broadcast data packet), which comprises location information, to the synchronized mobile telephone (10) (read as external device) using the inquiry message with extended field (read as without a request for a connection) (see [0050; 0052]).

Consider **claim 17**, Davies disclose a wireless communication method capable of **push mode** (read as connectionless; [0036 and 0041]) broadcast comprising:

inquiry message with extended field (read as synchronization information) for synchronization with more than one mobile telephone (10) (read as receiver; abstract; [0057 - 0061]), and CA data (read as generating broadcast packet; fig. 4) for containing location information (read as broadcast data; [0050; 0068 - 0069]);

broadcasting inquiry message with extended field (read as synchronization information; [0052; 0057 - 0061]) to the mobile telephone (10) (read as receiver) for synchronization;

transmitting CA data (read as broadcast data packet), which comprises location information, to the synchronized mobile telephone (10) (read as receiver) using the said inquiry message (read as without a request for a connection setup) (see [0050; 0052]);

executing a connection window for connection setup with the mobile telephone (10) that requests to be connected as disclosed by using the pull mode, which allows a user (read as receiver) to connect to the server via base station or beacon (12) and therefore a connection window would be established for communication from the receiver to the base station (12). The technique is common in Bluetooth systems for establishing slave to master communication (see Bluetooth Spec. 1.0B, sec. 10.8.4; and [0038]).

Consider **claim 19** as applied to claim 17, Davies et al. disclose clock data (read as synchronization information) for synchronization and CA broadcast data (read as broadcast data packet) for transmission of location based information as part of the inquiry message, therefore, the slot or window will be available to transmit the said data or information ([0054]). In addition, it is also disclosed a switch from clock (read as synchronization) to data (read as broadcast packet) can be accomplished at "half-way marks" (meaning during a given transmission slot or window, so thereby a window is split into two, one for data and one for sync info) which would define a so called beacon

window and broadcast window for synchronization information and broadcast data packet, respectively ([0056]).

Consider **claim 20** as applied to claim 19, Davies et al. disclose an inquiry message with an extended data field (read as BID packet) which is used for synchronization information ([0050; 0057 - 0061]).

Consider **claim 21** as applied to claim 20, Davies et al. disclose that inquiry message with an extended field (read as BID packet) contains beacon identity (read as Bluetooth device address), and beacon clock (read as clock information) ([0042 - 0045] and [0050]).

Consider **claims 22 and 23** as applied to claims 21 and 22, Davies et al. the inquiry message with an extended field (read as BID packet) further contains position of the first packet (read as offset data; [0057]) and repetition number ([0060 and 0065]) (read as "at least one of" a configuration of data window, a position of the connection window and an error check and also the data window contains "at least one of" ACL packet type, a repetition number, a broadcast profile, and an offset data; see [0057 - 0061]).

Consider **claim 24** as applied to claim 17, Davies et al. disclose a Bluetooth link for his invention ([0067]).

Consider **claim 25** as applied to claim 1, Davies et al. disclose broadcasting inquiry message (read as broadcast data packet is transmitted) through the transceiver of the base station (12) without carrying out a complete inquiry or paging procedure, since a push mode is implemented, therefore, an inquiry and or a paging procedure is

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not carried out because it is not necessary for the portable terminal (read as external device) to join the piconet yet at the same time it can receive broadcast information and make use of it (see [0036; 0038; 0041; 0052]).

Consider **claim 26** as applied to claim 1, Davies et al. disclose broadcasting inquiry message (read as broadcast data packet is transmitted) through the transceiver of the base station (12) without carrying out a complete Bluetooth connection setup, since a push mode is implemented, therefore, an inquiry and or a paging procedure is not carried out and thus a connection setup is not carried out, because it is not necessary for the portable terminal (read as external device) to join the piconet yet at the same time it can receive broadcast information and make use of it (see [0036; 0038; 0041; 0052]).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Davies et al. (U.S. Application # 2002/0002034)** in view of **Rankin (U.S. Application # 2002/0081972)**.

Consider **claims 7 and 16** as applied to claims 2 and 10, Davies et al. fail to disclose broadcast data packet contains a class of the broadcast information, a packet size and a payload.

In the related field of endeavor, Rankin discloses personal broadcast data packet (60) contains MET (read as class of the broadcast information), PLM (read as packet size), and SEM (read as payload) (see [0052] and fig. 3).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davies et al. with the teachings of Rankin in order to implement well-known technique for broadcast packet transmission to conserve financial resources.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Davies et al. (U.S. Application # 2002/0002034)** in view of **Bluetooth Specification Version 1.0B**.

Consider **claim 18** as applied to claim 17, Davies et al. fail to disclose the step of executing the connection window comprises: receiving a link management protocol (LMP) message from the receiver that requests to be connected; and exchanging a POLL packet with the receiver and setting up the connection.

In the related field of endeavor, Bluetooth Specification v. 1.0B discloses that slave (read as receiver) initiates LMP_SCO_link_req (read as LMP message) to the master for a connection link (see section 3.21.2 pg. 220). In addition, a poll packet is used at the start of a new connection by the master and the slave (read as receiver) (see section 5.3.1, pg. 68).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the teachings of Davies et al. with the teachings of Bluetooth Specification 1.0B in order to implement existing technique for convenience, conformity with the standard, and conservation of financial resources.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1102. The Examiner can normally be reached on Monday-Friday from 9:30am to 7:00pm.

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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

Fayyaz Alam

April 13, 2007

EDAN ORGAD
PRIMARY PATENT EXAMINER

Edan Orgad 4/14/07